Unicom TIC Management System (UMS)

Project Submission Report

Project Overview

1. Key Features Implemented
   * User Login with Role-Based Redirection
     + Admin
     + Teacher
     + Student
   * Course & Subject Management
   * Student Registration and Record Handling
   * Exam and Marks Management
   * Timetable Scheduling with Lab/Hall Allocation
   * Attendance Management Module
   * Reset Password Functionality
2. Technologies Used

* Programming Language:
  + C#
* Framework:
  + - Windows Forms (WinForms)
    - .NET
* Architecture:
  + MVC (Model-View-Controller)
* Database:
  + SQLite
* Others:
  + .Net
  + GitHub

3. Challenges Faced and Solutions

* Role-Based Dashboard Redirection:
  + Solved using `switch-case` and form instances.
* Handling DataGridView Events:
  + Managed update/delete actions with row click logic.
* Marking Attendance by Date & Subject:
  + Implemented unique constraints on (StudentID, SubjectID, Date).
* Form Validation & Error Handling:
  + Used try-catch blocks and conditional checks.
* Password Reset Flow:
  + integrated a `ResetPasswordForm` and linked it from Login.
* Using AI to fixed errors

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